with the appropriate authorities. There is a task force at the ground level.

श्री सुन्दर सिंह भंडारी: श्रीमन, यह जो कर्ज देने की बात है, रुपया देने की बात है, बैंक्स के द्वारा इसकी व्यवस्था है। बैंक्स की वर्किंग और इसके लिए जो पैसा इस समय अवेलेबुल है उसकी इतनी कमी है कि जयपुर में ही 4 हजार के करीब एप्लीकेशंस आने के बाद केवल 26 या 28 एप्लीकेशंस मंजूर की जा सकी हैं। यह जो प्रोग्रेस है इसमें ज्यादा एप्लीकेशंस मंजूर हों और उनको समय पर पैसा मिल जाए क्या इसके लिए कोई विशेष व्यवस्था या विशेष फंड एलाट करेंगे या किया हुआ है?

SHRI M. ARUNACHALAM: Sir, under the scheme, money is not a problem. According to the Reserve Bank of India, in February-March, 1995, they have sanctioned, disbursed, Rs. 341.69 crores under this scheme.

SHRI SUNDER SINGH BHANDARI: But, state-wise, how many cases in each? Applications are in lakhs now. You say only Rs. 3,003 lakhs were distributed. What is the percentage that way?

SHRI M. ARUNACHALAM: That is what I am saying. So far, up to the end of March, 1995, 1,87,821 cases have been sanctioned and an amount of Rs. 341.69 crores has been disbursed.

MR. CHAIRMAN: Question No. 602.

Utilization of Biotechnology for Economic Growth

*602. DR. SHRIKANT RAMCHANDRA JICHKAR: Will the PRIME MINISTER be pleased to state:

(a) whether Government are aware that Biotechnology can gainfully be employed for national development and economic growth in the country;

(b) if so, in what manner this can be achieved;

(c) what is being done in our country in this regard;

(d) whether it is also a fact that our country is lagging far behind in this area; and

(e) if so, what steps are being taken to bring our country at par with other countries developed in this area?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE AND THE MINISTER OF STATE IN DEPTTS. OF ATOMIC ENERGY AND SPACE AND THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE & TECHNOLOGY (SHRI BHUVNESH CHATURVEDI): A Statement with respect to (a) to (e) is laid on the Table of the House.

Statement

(a) to (c) Biotechnology is a repaidly advancing Field and finds application in the areas of agriculture, health, environment protection, industry and many other developmental sectors. Scientific agencies, namely, the Council of Scientific and Industrial Research (CSIR), the Indian Council for Medical Research (ICMR), the Indian Council for Agricultural Research (ICAR), the Department of Biotechnology, the Atomic Energy and many socio-economic Ministries are engaged in research and development, demonstration and application efforts. To accelearate the development and appliction of this field, a separate Department of Biotechnology was created. A large number of programmes of national relevance for economic growth have been taken up. Some of the successful ones are: demonstration of oil palm cultivation, cardamom, biofertilizers, biological pest control, semi-intensive aquaculture of prawn, and embryo transfer technology for cows, buffaloes and sericulture. Research and development in frontline areas of biotechnologies; creation of infrastructure facilities and a human resource development programme in 32 institutions have been started. Scientists are engaged on products and process based, demand driven research projects for economic growth in the country.

(d) and (e) Sustained efforts have been made to develop the field of biotechnology through various mechanisms. A number of international, bilateral and multilateral cooperation programmes are being implemented to enable the scientists in this country to share knowledge and experience of other countries and also provide their own knowledge and expertise to others. The successful collaborations are with the United States, U.K., Sweden, Switzerland and Poland. A major programme with G-15 countries and other Asian countries is also under implementation for medicinal and aromatic plants and biotechnology and biodiversity activities in the Asian region. The Department receives scientific inputs from a Standing Advsiory Committee consisting of non-resident Indian scientists from abroad. About 20 young scientists are sent abroad every year for training in recognised international laboratories. Leading international experts are also invited for sharing the current status of development of biotechnology in other countries.

DR. SHRIKANT RAMCHANDRA JICHKAR: Sir, in reply to the question, the hon. Minister of State has mentioned that there are successful collaborations with the USA, the UK, Sweden, Switzerland and Poland. In this list, the former-Soviet Union Countries are totally absent whereas the fact is that in the field of bio-technology, the most advanced development is in the former-Soviet Union countries. Sir, the Institute of Genetics and Cytology of the Byelorussian Academy of Science is the most advanced in the area of microbial fertilizers. No one can beat Tajikistan in using azobactor for growing tomatoes. The Institute of Microbiology of the Latvian Academy of Sciences is the foremost in the simplest way of making lysin by microbiological synthesis. The Siberian Institute of Cytology and Genetics has been working on lysin for the last two decades. I do not want to elaborate on the list. I want to ask the hon. Minister, in view of these advanced developments in the former-Soviet Union countries, why collaboration is not made with them and when collaboration will be made with them.

SHRI BHUVNESH CHATURVEDI: Mr. Chairman, Sir, the hon. Member is correct. But because of some misunderstanding we have not mentioned them. We are closely working with several States of the former Soviet Union. But I don't have the details just now.

DR. SHRIKANT RAMCHANDRA JICHKAR. Thank you, Sir, for assuring the House. Our research in biotechnology seems to be influenced by the western modeals, of the USA, the UK, etc., whereas our Prime Minister has stressed the need for making the use of ancient Indian knowledge in biotechnological and other research. He has created a separate Department of Ayurveda also. Ancient India was rich in biodiversity. Kalidasa's *Rithusamharam* is one of the best examples of how much the Sanskrit literature is rich and replate with the knowledge of Indian biodiversity. In view of this, what efforts will be made to dovetail the ancient Indian knowledge into the modern biotechnological research?

SHRI BHUVNESH CHATURVEDI: Sir, nobody can deny the fact that we are proud of the fact that we have an Indian medicine system. But, as a matter of fact, a modern approach to this subject has been taken in the last 20 years. We have created the Department only in 1986. Since then we are following it.

DR. SHRIKANT RAMCHANDRA JICHKAR: What concrete steps will be taken? What are the concrete steps that the Government would like to take?

SHRI BHUVNESH CHATURVEDI: Sir, as I submitted, we are proud of the Indian system. But, at the same time, I

don't have categorical informaiton as to what projects we are having on this. As I have mentioned, the Department was created in 1986. We are working on that. We are not far behind the other countries of Europe and America.

डा॰ बापू कालदाते: क्या सदन को इसकी जानकारी देंगे?

श्री भुवनेश चतुर्वेदी: जरूर देंगे।

SHRIMATI KAMLA SINHA: Sir, it is true that biotechnology and biodiversity is a very important factor for the development of any nation. But, unfortunately, in the last so many years, in the name of biodiversity experiment, many various of indigenous sturdy seeds have been eliminated, whereas these genes have been kept in the gene banks of developed nations. They have introduced hybrid varieties here. When there is any drought or anything like that these hybrid genes die. Had it been our seeds, they would have survived. This is one aspect.

Another aspect, which I would like to point out, is that even in the case of animals and insects we have seen that the biodiversity has created havoc. Recently, I have read a news item in a newspaper that bees were imported from Australia and other countries into Karnataka and Kerala and these bees had killed our indigenous bees. These imported bees cannot produce honey in our country. So, what is happening?

A third example, which I would like to mention here, is that the pesticides are killing our insects, the beneficial insects like earthworms. They are all gone now becuase we are using pesticides. Now I have read a news item that we are importing earthworms from Germany and cowdung from Holland. What is happening, Sir? In the name of advanced biotechnology and biodiversity we are playing havoc with our own system, with our indigenous variety of seeds and animal and plant life. What is happening? I would like to get an answer from the Minister.

MR. CHAIRMAN: What is happening with regard to all these?

SHRI BHUVNESH CHATURVEDI: Mr. Chairman, Sir, I don't know about cowdung imports. The hon. Member must be having the information. But I can only say that we have set up three gene banks. We have medicinal plants at Lucknow, New Delhi and Trivandrum.

SHRIMATI KAMLA SINHA: Sir, I seek your protection. The Minister has answered three questions and in the answer he had said, "I don't know. I am not aware of the facts." Why is he answering the questions when he is not aware of the facts? Sir, this is a very unfortunate situation. *(Interruptions)*.

MR. CHAIRMAN: What is your pointed question? You have said so many things. If you say one thing the Minister can answer it. *(Interruptions)*.

SHRIMATI KAMLA SINHA: Sir, I have put very valid questions.

DR. MURLI MANOHAR JOSHI: Sir, the question is ver simple. What is happening to the degradation of biodiversity in the country? What steps is the Minister taking to protect biodiversity in all these fields? This is a simple question.

SHRI BHUVNESH CHATURVEDI: Sir, I cannot reply to three hon. Members at a time. If Joshiji puts a question, I am prepared to reply to it. If he puts a question, I am prepared to reply to it. *(Interruptions)*.

MR. CHAIRMAN: You have done a lot to maintain biodiversity.

श्रीमती सरला माहेश्वरी: माननीय सभापति महोदय, बायो-प्राद्योगिक क्षेत्र इतनी अकूत संभावनाओं से भरा है लेकिन इन अकूत संभावनाओं का इस्तेमाल हमारे यहां उस ढंग से नहीं हो पा रहा है, जिस ढंग से होना चाहिए था। यह माननीय मंत्री जी के उत्तर से ही स्पष्ट होता है कि कितने अराजक ढंग से हमारे यहां काम हो रहा है। हमारे यहां जिस निजी तकनीक के अनुसार

बायो-टेक्नालाजी का इस्तेमाल करने की जरूरत थी, वह न करके हमारे मंत्री महोदय गोबर का आयात कर रहे हैं। बहरहाल, मैं मंत्री महोदय से यह जानना चाहती हूं कि हमारे देश में कृषि की लागत को कम करने के लिए रासायनिक खाद के इस्तेमाल में और कीट-नाशकों के इस्तेमाल में करीब 200 करोड़ रुपये की विदेशी मुद्रा हम खर्च करते हैं। हाल ही में एक सर्वे हुआ था कि अगर इस बायो-टेक्नालाजी के क्षेत्र में सिर्फ 30 करोड़ रुपये हम खर्च करें तो हम 200 करोड़ रुपये बचा सकते हैं। मेरा मंत्री महोदय से स्पष्ट सवाल है कि कृषि के क्षेत्र में जो अकूत संभावनायें हैं, उनको देखते हुए क्या कोई विशेष योजना आपने बनायी है, और क्या आप बायो-टेक्नालाजी के क्षेत्र में कोई पालिसी पेपर इश्यू करने जा रहे हैं?

THE PRIME MINISTER (SHRI P.V. NARASIMHA RAO): Sir, right now I am announcing not Rs. 30 crores but Rs. 50 crores for whatever the hon. lady Member is saying. It is not that anything is being lost sight of. The fact remains that for a long time our own scientists have been neglected. Only lipservice has been paid in this country. Only after Independence we have gone into all these things.

Something was said about the gene bank. Hon. Members may kindly note that the best gene bank, the richest gene bank is in India and that is near Hyderabad. We have taken up in the G-15 the specified programme of gene banks. Fifteen developing countries in the world have chosen India to lead this programme of gene bank. Now this is our record. It is true that we have been only expressing pride. All sections of the House are vying with each other in expressing pride. But, at the same time, what is being done in a constructive manner? I would like the hon. Members to know. I don't claim that all the needs to be done is being done. That is not my claim at all. Whatever has been completely forgotten, ignored and in fact destroyed over centuries, you cannot reconstruct it. There are people who cannot even identify *jari booti* in the forests. We know that in all our villages just at a distance of half a mile from the village there was a thick forest and whenver there was any problem the local people used to go into the forests to bring some leaves to cure the diseases as far as possible. We also know of these things. Some of these things we know. In fact, in our own childhood we were brought up on those *moolikas*. There were no antibiotics as we have today. Things are happening everywhere. We have to integrate them. We cannot say that we have all those things. So, we don't want to look at others. It is not the question of America or Germany or anything. There are different systems coexisting in the world. New systems are coming up. Nobody knew about acupunture. Nobody hard about it. It is becoming more and more popular all over the world and in India also. So,these new things have to be absorbed. Let thoughts come from all sides. We are here to sort them out and to integrate them. We do not want to forget our own heritage. Keeping the heritage alive, we want to integrate all these system. There was an experiment on integrated medicine. About 30 years back or 45 years back, there was a system of integrated medicine. There were institutions. But, from the Ayurvedic Pandits and other purists, there was opposition. I know that these institutions had to be closed down because of the opposition from the purist people of Ayurveda. I can cite the examples of all those institutions. I don't say whether it was right or wrong. But the point is that even today some Ayurvedic physicians, in the villages, give injections. So, these things are happening. Let us try to understand them and integrate all these for the good of the country. That is what I would like to say. If the hon. Members want to see the biggest gene bank in the country, I would be glad to arrange for them to go there. It is near Pattancheru which is about 20 miles from Hyderabad. The kind of work that has been done there is unparalleled.